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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/385,014	08/27/1999	NAOHARU SHINOZAKI	P8075-9014	8603

7590 06/23/2005

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EXAMINER	
LE, DINH THANH	
ART UNIT	PAPER NUMBER
2816	

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No.	Applicant(s)	
	09/385,014	SHINOZAKI, NAOHARU	
	Examiner	Art Unit	
	DINH T. LE	2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 April 2005* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 4-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

FINAL REJECTION

Claims Rejections

Claim Rejections - 35 USC ∋ 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2, 4-5 and 16-21 are rejected under 35 USC 103(a) as being unpatentable over Takahashi et al (JP40927070).

Takahashi et al teaches an amplifier circuit in Figures 1-5 comprising a differential circuit (N3, N4, P3, P4), a current regulating circuit (P2, N6), a constant current source (P1, N5) and a even number of feedback delay elements (inverters V1, V3-V5) but does not disclose the limitation that the regulating circuit current increases an amount of the current flowing through the differential circuit to be increase in response to the node signal when the first transistor changes its state from an activated state in response to an external signal and the node signal rises, such that only rising delay time of the node signal is shortened. For example, the circuits in Figures 1 and 4 of Takashi have the structure similar to the claimed circuit as shown in Figures 6-7 of the present invention with exception of that Takashi employs fourth feedback delay elements (V1, V3-V4) instead of one feedback delay element (5) as shown in the present invention. In order to meet the above recited limitation, only one inverter must be used in the circuit of Takahashi et la. However, a skilled artisan recognizes that the feedback signals in the

circuit of Takashi is to used to provide a predetermined delay for activating/deactivating the current regulating circuits (P2, N6) and the speed cycle time of the amplifier device is determined by the number of the feedback delay elements, see the Abstract. Since the circuit of Takahashi et al may be used in a predetermined system, obviously, the parameters of the circuit components such as a number of feedback delay elements (V1-V3) must be selected to provide a performance that would accommodate with the required specification of the predetermined system. Thus, selecting an optimum number of feedback delay elements of Takahashi et al, i.e., one inverter, for providing a predetermined speed cycle time required by a predetermined system in which the circuit of Takahashi et al is to be used is considered to be a matter of a design expedient for an engineer. *In re Boesch*, 617F.2d272.205USPQ215(CCPA 1980). It would have been obvious to a person having skill in the art at the time the invention was made to select one feedback delay element for the circuit of Takahashi et al for the purpose of increase the speed cycle time of the amplifier. Noted that the regulating circuit current (P2, N6) of the modified circuit of Takashi et al including one selected inverter would "increases an amount of the current flowing through the differential circuit to be increase in response to the node signal rises when the first transistor changes its state from an activated state in response to an external signal, such that only rising delay time of the node signal is shortened as claimed.

Claims 6-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Figure 1 of the applicant admitted prior art in view of Takahashi et al (JP40927070).

Figure 1 of the admitted prior art shows a circuit comprising the amplifier (2a), and a processing signal circuit or a latch circuit (3) but does not discloses that the amplifiers have a current regulating circuit increases an amount of the current flowing through the differential

circuit in response to the node signal such that only rising delay time of the node signal is shortened. Takahashi et al teaches a modified amplifier circuit as discussed above. It would have been obvious to a person having skill in the art at the time the invention was made to employ the modified amplifier circuit taught by Takahashi et al in the circuit of the admitted prior art for the purpose of increase the speed of cycle time. Note that, as notoriously well known in the art, the latch circuit or the processing signal circuit of the admitted prior art can be duplicated to provide more output signals. Thus, duplicating the latch circuit of the circuit of the admitted prior art is a common practice for an engineer is considered to be a matter of the design expedient for the engineer depending upon a particular application. See *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Noting that the phase difference between the output signal and the output signal of Takahashi et al is adjustable using the inverters. Therefore, adjusting the output phase same as the input phase for a particular environment would have been obvious to a person having skill in the art.

Response to Applicant's Arguments

The applicant argues that Takahashi fails to disclose at least a current regulating circuit that increases an amount of current flowing through a differential circuit when a node signal rises because the current flowing through the differential circuit by turning on the transistor N6 after the node signal N4 completely rises to a high level. The arguments are not persuasive because a skilled artisan recognizes that the feedback signals in the circuit of Takashi is to used to provide a predetermined delay for activating/deactivating the current regulating circuits (P2, N6) and the speed cycle time of the amplifier device is determined by the number of the feedback delay

elements, see the Abstract. Since the circuit of Takahashi et al may be used in a predetermined system, obviously, the parameters of the circuit components such as a number of feedback delay elements (V1-V3) should be selected to provide a performance that would accommodate with the required specification of the predetermined system. Thus, selecting an optimum number of feedback delay elements of Takahashi et al, i.e., one inverter, for providing a predetermined speed cycle time required by a predetermined system in which the circuit of Takahashi et al is to be used is considered to be a matter of a design expedient for an engineer, *in re Boesch*, 617F.2d272.205USPQ215(CCPA 1980), that would have been obvious at the time of the invention. When one delay element is selected in the circuit of Takahashi, the current flowing through a differential circuit would be increased in response to the node signal rises.

CONCLUSION

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DINH T. LE whose telephone number is (571) 272-1745. The examiner can normally be reached on Monday-Friday (8AM-7PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIMOTHY CALLAHAN can be reached at (571) 272-1740.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DINH T. LE
PRIMARY EXAMINER